REMARKS

Claims 1-8 are all the claims pending in the application. Claims 1-4, 7 and 8 are rejected. Claims 1, 3 and 4 are amended. Claim 2 is cancelled. Claims 5 and 6 are withdrawn from consideration.

The amendments to the Claim 1 are supported by the disclosure at page 9, lines 14-25 of the original specification.

Title

The Examiner objects to the Title as the claimed invention does not include a method. The title has been amended to remove this basis for objection.

Abstract

The Examiner objects to the Abstract because it uses legal language ("said"). The Abstract has been amended to remove this basis for objection.

Claim Rejections - 35 U.S.C. § 102

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Katsumata et al. (U.S. Patent 5,290,163). This rejection is traversed for at least the following reasons.

Claim 1 has now been amended to incorporate the limitations of claim 2, which was not rejected on the basis of Katsumata et al. Accordingly, this rejection is overcome.

Moreover, Katsumata et al is cited for its teaching of a tire vulcanizing mold comprising a plurality of circumferentially segmented pieces 3 (see especially Figures 3 and 5). The Examiner asserts that at least one of the segmented pieces has "a generally round-bar-shaped pin protector 14" on an assembling face. The Examiner further asserts that the adjoining segmented piece has "a first depressed groove 15 of generally arcuate cross section" to be fitted with the pin protector on an assembling face between the segmented pieces.

Claim 1 expressly requires pin protectors that are "generally round-bar shaped" and are "on an assembling face between an adjoining segmented piece in a projecting manner." Claim 1 also now requires "first radial depressed grooves."

By contrast, the structures 14 and 15 shown in Fig. 5 of Katsumata et al denote the side surfaces of the smaller part 3 formed as curved surfaces to prevent the protrusion 16 or the blade 17 from being divided at its midway. The assembling face D of the segmented piece IA (see Fig. 1.) has a largely curved surface aside from a pin protector. It is the curved assembling faces D in

the present application that correspond to Katsumata's side surfaces 14 and 15 of the smaller part 3. Clearly, the curved side surfaces 14 and 15 of the smaller part 3 are quite different from the pin protectors and the first depressed grooves of claim l.

Claims 1-4, 7 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Fisher (U.S. Patent 2,030,861; Figures 3-4). This rejection is traversed for at least the following reasons.

The Examiner asserts that Fisher teaches a tire vulcanizing mold comprising a plurality of circumferentially segmented pieces 12, 14, 16, at least one of the segmented pieces having a generally round-bar-shaped pin protector 23-25 detachably fitted into second depressed grooves of generally arcuate cross section on an assembling face. The Examiner also asserts that the adjoining segmented piece has first depressed grooves 27, 29, 30 of generally arcuate cross section to be fitted with the pin protector on an assembling face between the segmented pieces. Finally, the Examiner asserts that such first and second depressed grooves have generally the same diameter.

Applicants respectfully submit that Fisher discloses three lugs 23, 24 and 25 and recesses 27, 29 and 30 provided between adjoining mold segments. Two of the three lugs 23 and 24 are disposed vertically. The third lug 25 is disposed horizontally, respectively.

By contrast, according to the present invention, there are a plurality of pin protectors provided radially (corresponding to "horizontally" in Fisher) as now defined in amended claim 1. Specifically, the claim now recites "at least one of the segmented pieces has second radial depressed grooves of generally arcuate in cross section provided plurally in an axial direction for fixing the pin protectors."

As explained above, the invention, as recited in claim 1 and claims dependent from claim 1, is different from the cited invention.

In the case where only one pin protector is provided axially (or in an axial plane) between the adjacent surfaces of the segmented pieces, twisting may occur with respect to the center of the pin protector between the assembling faces (segmented faces). In contrast, twisting is prevented by a plurality of pin protectors provided axially (in an axial plane) of the mold of the invention as recited in claim 1.

Furthermore, the recesses 27, 29 and 30 in Fischer that are for receiving lugs 23, 24 and 25 are formed by machining from three directions in each of the segmented surfaces. By contrast, depressed grooves of the present invention are formed by machining from only one direction (axial direction), so segmented pieces for fitting without twisting can be obtained with low cost.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by MacMillan (U.S. Patent 2,372,217; Figure 5). This rejection is traversed for at least the following reasons.

Claim 1 has now been amended to incorporate the limitations of claim 2, which was not rejected on the basis of Katsumata et al. Accordingly, this rejection is overcome.

The Examiner asserts that MacMillan teaches a tire vulcanizing mold comprising a plurality of circumferentially segmented pieces (2, 4, 5), at least one of the segmented pieces having a generally round-bar-shaped pin protector 30 on an assembling face, and the adjoining segmented piece having a first depressed groove 31 of generally arcuate cross section to be fitted with the pin protector on an assembling face between the segmented pieces.

However, MacMillan does not disclose a generally "round-bar-shaped pin protector" as originally claimed. Moreover, it does not teach "a first depressed groove of generally arcuate in cross section to be fitted with the pin protector" as originally claimed in claim 1. In fig. 5, MacMillan only shows dowel pins 30 for fitting two segments 4 and 5 and openings 31 for receiving them. These structures do not meet the claim limitations.

In particular, McMillan discloses a dowel pin 30 and an opening 31 formed on each edge of segments 4 and 5. This structure is different from that of the present invention having first radial depressed grooves to be fitted with pin protectors provided plurally in an axial direction.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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